UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

DATE: DEC 03 2020

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Veolia ES Technical Solutions, L.L.C., Sauget, IL

FROM: Karyn DeFranco, Physical Scientist
AECAB (MN/OH)

THRU: Brian Dickens, Section Chief
AECAB (MN/OH)

TO: File

BASIC INFORMATION

Facility Name: Veolia ES Technical Solutions, L.L.C.,

Facility Location: 7 Mobile Avenue, Sauget, IL 62201

Date of Inspection: 10/19/2020 through 10/21/2020

EPA Inspector(s):
1. Karyn DeFranco, Physical Scientist
2. Jason Schenandoah, Environmental Engineer
3. Daniel Heins, Physical Scientist

Other Attendees:
1. Dennis Warchol, Environmental Health and Safety Manager
2. Shontez Jones, Safety Manager
3. Joseph Baumann, General Manager
4. Nancy Paddock, Environmental Engineer
5. Adam Moser, MACT Manager

Contact Email Address: Dennis.Warchol@veolia.com

Purpose of Inspection: To evaluate facility compliance with the Clean Air Act with emphasis on Leak Detection and Repair (LDAR) requirements.

Facility Type: Veolia ES Technical Solutions, LLC owns and operates the Sauget plant, a hazardous waste incinerator.

Regulations Central to Inspection: National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Off-Site Waste and Recovery Operations (Title 40 of the Code of Federal Regulations, Part 63 [40 CFR Part 63], Subpart DD); NESHAP for Benzene Waste Operations (Title 40 of the Code of Federal Regulations, Part 61 [40 CFR Part 61], Subpart FF); NESHAP for Volatile Organic Liquid Storage Vessels (Title 40 of the Code of Federal Regulations, Part 60 [40 CFR Part 60], Subpart Kb); and NESHAP for Hazardous Waste Combustors (Title 40 of the Code of Federal Regulations, Part 63 [40 CFR Part 63], Subpart EEE).

Virtual Opening Conference Start Time: October 19, 2020, 1:00 pm
Virtual Opening Conference End Time: October 19, 2020, 2:30 pm
Arrival Time: October 19, 2020, 3:30pm
Departure Time: October 19, 2020 5:30pm
Arrival Time: October 20, 2020, 8:15 am
Departure Time: October 20, 2020 4:00 pm
Virtual Closing Conference Start Time: October 21, 2020, 8:30 am
Virtual Closing Conference End Time: October 21, 2020 8:51 am

Inspection Type:

☐ Unannounced Inspection
☒ Announced Inspection

OPENING CONFERENCE

☒ Presented Credentials
☒ Stated authority and purpose of inspection
☐ Provided Small Business Resource Information Sheet
☒ Small Business Resource Information Sheet not provided. Reason: Not a small business
☒ Provided CBI warning to facility

The following information was obtained verbally from Veolia personnel unless otherwise noted.

Process Description:
Veolia ES Technical Solutions, L.L.C. (Veolia) operates hazardous waste incinerators and accepts offsite waste for destruction and final disposal. Containers of both hazardous and non-hazardous waste arrive via truck and are stored in one of several storage areas; bulk shipments of hazardous and non-hazardous wastes arrive via tanker truck and are stored on two tank farms at the Facility, Tank Farm #1 and Tank Farm #3, with 10 and 8 tanks, respectively. A full-depth vertical sample of each incoming load, except explosives and commercial products, is taken and analyzed in a lab, using EPA Hazardous Waste Test Method SW-846, to confirm the waste profile provided by the waste generator, detect any potential Polychlorinated Biphenyls (PCBs),

and measure metal concentrations. If the waste profile does not meet the sample, then the waste is sent for further review in an attempt to resolve the discrepancy. The generator is contacted regarding the waste and if the generator cannot resolve the discrepancy, then the waste is sent back to the generator. Any wastes with PCBs are sent to Veolia's Port Arthur facility for destruction. Wastes that are accepted for destruction are incinerated in one of the three combustion units, two identically constructed, fixed hearth units (Incinerators 2 and 3) and one transportable rotary kiln (Incinerator 4). Wastes that have high or low pH or are odorous will often be directly injected into the incinerator. Each incinerator has a secondary combustion chamber. Ash created from incineration is reburned before being sent to a hazardous waste landfill for disposal. Each storage tank is vented to 55-gallon drum, activated carbon, adsorption beds for emissions control. Solid waste is often broken down into smaller charges, as needed, at one of the two material processing areas.

Staff Interview: Veolia has chosen to comply with the National Emission Standard for Equipment Leaks at 40 C.F.R. Part 61 Subpart V for LDAR purposes. LDAR monitoring is completed in-house and they use a Toxic Vapor Analyzer 2020 (TVA) to monitor; the TVA is calibrated using zero air and methane at 9800 ppm. Method 21 measurements are made on valves annually, pumps monthly, and emergency vents every four days. It takes staff about two and a half days to conduct Method 21 measurements on all valves throughout the facility. Liquid storage tanks are designated into "high" and "low" BTU tanks. Waste with 3,000-5,000 or greater BTU is considered high BTU tanks, and waste generally less than or equal to 1,000 BTU is considered low BTU tanks. There are no designated tanks for benzene and the all tank farms are considered in benzene service. Tanks are sonic tested annually for integrity. Containers are controlled following level 1 controls while being processed. Automatic Waste Feed Cut Offs (AWFCOs) are prompted by various parameter exceedances, most commonly from carbon monoxide. Carbon beds tend to be changed about every three years when controlling low BTU tanks and about every year on High BTU tanks. Spent carbon beds are sent through an incinerator for destruction. The only wastes that are not sampled by the facility are explosives and commercial products. Process planner software is utilized by the facility to track levels of certain compounds, such as chlorine and metals, that enter the incinerators to ensure they remain in compliance with relevant regulatory limits.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

Tanks #6 and #8 of Tank Farm 1 are located indoors. The pressure relief devices on Tanks #6 and #8 have a venting duct that connects to the pressure release side of the pressure relief device and vents outdoors. When Veolia performs Method 21 on the pressure relief devices, they do so from an air sample tube that is hanging outside the building and is fed into and through the venting ducts. When asked how long the TVA instrument probe is held in the sampling tube, Veolia personnel stated that they would leave it in there for about 10 to 15 seconds. Tank Farm 1 has a platform connecting Tanks #10, #20, #30, #40, #50, and #60. When EPA first started making Method 21 measurements on the platform, a leak was detected on the sampling port of Tank #10. After informing Veolia personnel that the

sampling port was leaking, Veolia personnel were observed working on the sampling ports of Tanks #20, #30, #40, #50, and #60 before monitoring was conducted. After the first Method 21 measurement on Tank #8's sampling port was completed, Veolia personnel was were observed working on the sampling port. Upon the second reading of Tank #8's sampling port, a leak was not detected.

Photos and/or Videos: were taken during the inspection.

Field Measurements: were taken during this inspection.

The following is a list of field measurement data provided in Appendix B:

- Calibration and drift checks for each TVA 2020 (ID #'s SL1555, A56575, A56584)
- Method 21 monitoring data

RECORDS REVIEW

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents (to be supplied to EPA by secure weblink as soon as practicable):

- Two years of one-minute data for each incinerator for:
  - Combustion chamber temperature and pressure for lower and upper chambers
  - Carbon monoxide (CO) emissions
  - Stack flow rate
  - Hazardous waste feed (lbs/hr)
- Carbon bed information including:
  - Specification sheets for carbon beds and/or other documentation describing efficiency
  - 5 years of carbon bed changeout records
  - Engineering calculations for breakthrough of carbon beds
- Annual benzene reports for last 5 years
- Summary of tank information
- 5 years of annual emissions report
- 5 years of semi-annual compliance reports for each NESHAPS and NSPS
- 5 years annual closed vent system Method 21 measurements and any subsequent repairs
- Records of all repairs of leaking components identified during this inspection

Compliance Assistance: Veolia personnel were informed of all leaks monitored throughout the facility. Veolia personnel was informed that the process by which the pressure relief devices on Tanks #6 and #8 are monitored is incorrect because the regulations require direct measurement of leak emissions at the component itself.

Concerns: Leaking components were discovered on the closed vent system of several tanks.

DIGITAL SIGNATURES

Report Author: Defranco, Karyn Digitally signed by Defranco, Karyn Date: 2020.12.03 10:53:03 -06'00'

Section Chief: BRIAN DICKENS Digitally signed by BRIAN DICKENS Date: 2020.12.03 16:19:29 -06'00'

APPENDICES AND ATTACHMENTS

1. Appendix A: Digital Image Log
2. Appendix B: Field Measurement Data

Facility Name: Veolia ES Technical Solutions, L.L.C.
Facility Location: 7 Mobile Avenue, Sauget, IL 62201
Date of Inspection: October 20, 2020

December 5, 2019**APPENDIX A: DIGITAL IMAGE LOG**

1. **Inspector Name:** Karyn DeFranco and Jason Schenandoah	2. **Date(s) of Inspection:** 10/19/2020-10/21/2020
3. **Company/Facility Name:** Veolia ES Technical, L.L.C.	4. **Street Address, City, State:** 7 Mobile Avenue, Sauget, IL 62201
5. **Number of Images:** 8	6. **Archival Record Location:** Jason Schenandoah OneDrive/Documents/Inspection Documents/Pictures

Image Number	File Name	Date and Time (incl. Time zone and DST)	Description of Image
43	10192020_0418.JPG	2020:10:19 04:18:02 pm	Material processing area #2
44	10192020_0418-2.JPG	2020:10:19 04:18:27 pm	Hazardous Waste Incinerator 3
45	10192020_0419.JPG	2020:10:19 04:19:39 pm	Hazardous Waste Incinerator 3
46	10192020_0420.JPG	2020:10:19 04:20:20 pm	Hazardous Waste Incinerator 3
47	10192020_0503.JPG	2020:10:19 05:03:29 pm	Hazardous Waste Incinerator 4 Rotary Kiln
48	10202020_0059.JPG	2020:10:20 12:59:55 pm	Tank #6 pressure relief device outlet
49	10202020_0102.JPG	2020:10:20 01:02:43 pm	Pressure relief device sampling air sample tube
50	10202020_0108.JPG	2020:10:20 01:08:01 pm	Pressure relief device vent duct outlet with air sampling tube exiting

*Original camera photos recorded with 24-hour timestamp, the time readings were 12 hours off and are corrected in this log to reflect it.

APPENDIX B: FIELD MEASUREMENT DATA

- EPA used three TVA 2020 models to conduct comparative Method 21 monitoring.
- EPA calibrated TVAs #A56575 and #A56584 before use with the following calibrations gas standards: Zero Air, 500 ppmv as Methane, 2,000 ppmv as methane, and 10,000 ppmv as Methane.
- EPA's 10,000 ppmv Methane calibration canister was empty after calibrating TVAs, Veolia personnel offered the use of their 9800 ppmv Methane for further calibration needs.
- EPA calibrated TVA #SL1555 using the 9800 ppmv Methane instead of the 10,000 ppmv Methane for the high span value; all EPA TVAs were drift checked using the 9800 ppmv Methane.

10/20/2020 Morning Calibration			
Span Gas (ppmv)	EPA # A56575	EPA #A56584	EPA #SL1555
500	497	496	475
2000	1,976	2,006	1,965
10000 (9800)	10,000	9,937	9,970

10/20/2020 Afternoon Drift Check			
Span Gas (ppmv)	EPA # A56575	EPA #A56584	EPA # SL1555
500	480	660	446
2000	1,900	2,626	1808
9800	9,020	1.25%	9456

- The Table below summarizes the equipment monitored during the inspection:

Equipment Type	Number of Components
Valves	150
Pumps	7
PRVs	12
Connectors	49
End Caps to Open-ended lines	45
Total	263

- Each detected leak was confirmed using another TVA. Most leaks were also confirmed by Veolia personnel. The table below summarizes the leaking equipment that was identified by EPA's monitoring using Method 21(Italicized reading numbers indicate flame out of the TVA instrument):

Date	Tank	Equipment Type	Reading	TVA ID#	Confirmation Reading	TVA ID#
10/20/2020	Tank #10	Sample Port	2.01%	A56584	1.5%	A56575
10/20/2020	Tank #60	Agitator	*2.0%*	A56575	*3.5%*	A56584
10/20/2020	Tank #40	Agitator	*3.5%*	A56575	*1.5%*	SL1555

10/20/2020	Tank #4	Agitator	*5%*	A56575	*1.08%*	Veolia Reading
10/20/2020	Tank #2	Agitator	1.45%	A56584	1.25%	A56575
10/20/2020	Tank #8	Sample Port Tag # 006732	1.5%	A56575	N/A	N/A
10/20/2020	Tank #8	Pressure Relief Vent	1.56%	A56575	5853	A56584
10/20/2020	Tank #304	Agitator	1.47%	A56584	1.24%	A56575
10/20/2020	Tank #302	Agitator	*3.6%*	A56575	1.37%	A56584
10/20/2020	Tank #300	Agitator	1.7%	A56584	2.8%	
10/20/2020	Tank #314	Agitator	2.1%	A56575	1.2%	A56584
10/20/2020	Tank #20	Level Indicator	8975 ppmv	SL1555	6800 ppmv	A56584
10/20/2020	Tank #310	Level Indicator	4200 ppmv	A56584	3647 ppmv	A56575
10/20/2020	Tank #40	Sampling Port	854 ppmv	A56575	725 ppmv	SL1555
10/20/2020	Loading rack #50	Manifold	1.83%	SL1555	1.6%	A56584

- The carbon bed serving Tank #300 had a reading of 750 ppm by TVA A56575.